XSCF 完全傻瓜配置手册

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目　录

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一． 文档说明：

本手册不是原理手册，完全是一个操作手册。如果对相关概念有任何疑问，请查看相关手册。同样由于版本更新的问题，命令及相关参数可能有较大变化，而且现在正是 fujitsu 产品更新换代频繁的时期，去现场作业前请下齐最新的手册，下面我只列出最基本的手册：

Getting Started Guide(C120-E345-03EN) （列出了 M4000&M5000 所有参考数目）
Overview Guide(C120-E346-03ZH)
SPARC Enterprise M4000（共 19 页，看完可以快速对 M4000 的硬件有个比较全面的认识）
Instance Priority（共 9 页，M4000&M5000&M8000&M9000）
Site Planning Guide(C120-H015-03EN) （对环境的要求等）
Installation Guide(C120-E351-03EN)
SPARC Enterprise Hardware Platform Guide

Administration Guide(C120-E331-05EN)
XSCF User's Guide(C120-E332-05EN)
XSCF Reference Manual(C120-E333-05EN) （下文中提到的所有 XSCF 的命令在 XSCF Reference Manual 都可以找到，而且有详细的参数说明）
Dynamic Reconfiguration (DR) User's Guide(C120-E335-04EN)
Capacity on Demand (COD) User's Guide （C120-E336-04EN）

Service Manual(C120-E352-03EN)
SPARC Enterprise M4000&M5000 MAINTENANCE MANUAL(R11B-0926-01EN)



二．XSCF 和 ILOM 比较之我见（以 M4000 和 T5120 为例）：

XSCF 和 ILOM 都是运行在 Service Processor 上的 Firmware。由于定位低端的 T 系列基本是采用 sun 的技术，而定位中端和高端的 M 系列基本是采用 fujitsu 的技术，所以也就体现出来完全不同的设计理念。分别叙述如下：

ILOM 的特点：

1. ILOM 不需配置就可以直接使用，只需执行 start /SP/console 切换到 OBP 下，就可以进行系统安装等，出发点是简洁、方便。当然如果没有进行过配置，当出现问题时，一些非常有用的功能无法使用。
2. 由于采用的是 LINUX 系统，所以 ILOM 的组织结构采用的是目录结构，也就是所有命令要么在相关目录下执行，要么要加上绝对路径。ILOM 的目录结构非常清晰。
3. 有非常好的命令帮助，而且可以使用 TAB 键补齐路径等。
4. 基本所有命令都是立刻生效，不需要重新启动。当然关机等命令除外。
5. 从定位故障而言，ILOM 做的更细，简洁方便人性化。在同等熟练的程度下，定位故障更快。
6. 进入 OS 后，进入 /opt/FJSVmadm/sbin/madmin 管理菜单，基本与 PrimePower 的没有什么大的不同
7. OBP 下的命令与 PrimePower 有很大不同，最基本的 show-devs,devalias,probe-scsi-all 依然还有，同时有 printenv 和 setenv 等命令。
8. 支持 SSH，telnet，https，http(事实上默认是 Redirect HTTP Connection to HTTPS)登录并进行管理。
9. 新机器的初始用户名 root，初始密码 changeme。

XSCF 的特点：

1. XSCF（虽然 M4000 一般都不会再去划 Domain）初次使用必须要有随机器配的钥匙，而且必须要进行初始配置才可以安装系统，出发点是提高管理性和便于维护。
2. 所有命令都是平行的结构，换言之，所有命令已经在内部的$PATH 里面，不需要输入路径，都是直接可以执行的，当然要加上相应参数。
3. 基本没有真正实用的命令帮助，不熟练的时候，如果没有一本 XSCF Reference Manual 在手边，可是会非常头大的。而且由于版本等问题，实际操作的时候，有些命令的参数可能你有手册在手边也无法正常执行。当然 XSCF 的命令基本上都是比较好记的，尤其是一些基本命令。事实上有些客户现场你也是不可能带手册或笔记本进去的。
4. 不少更改配置的命令都是需要重新启动才生效的，而且是当你选择确认时就重新启动了，而不是等你将所有命令都输完。
5. XSCF 没有修复逻辑错误方面的命令。也许设计者们认为：这些机器都是用在重要场合的，探测器不会有误报，即使有误报，出于安全起见，宁可错杀一千，都要按照 Maintenance Manual 里面的操作顺序进行部件更换。
6. 进入 OS 后，进入 /opt/FJSVmadm/sbin/madmin 管理菜单，已经做了大量简化，也许 XSCF 本身就已经达到了这些菜单的作用吧。
7. OBP 下的命令与 PrimePower 有很大不同，最基本的 show-devs,devalias,probe-scsi-all 依

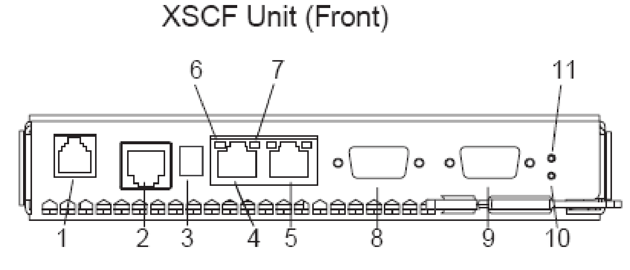
然还有。

8．支持 SSH，telnet，https 登录并进行管理，不支持 http。

9．新机器的默认用户 dafault，初次登录必须使用随机器配的钥匙。

三．XSCF 基本配置步骤

XSCF Unit Panel(Front) on the Midrange Systems ：



Number	Description	Number	Description
1	RCI port	7	ACT LED
2	Serial port	8	UPC1
3	USB port	9	UPC0
4	ETHERNET#1 port (XSCF-LAN1 port)	10	CHECK LED
5	ETHERNET#0 port (XSCF-LAN0 port)	11	READY LED
6	Link Speed LED		

Link Speed LED

Located on each of the LAN ports, the Link Speed LED is a LAN LED that lights up in green. The Link Speed LED is turned on when a 100-Mbps LAN connection is established, and it is not turned on when a 10-Mbps LAN connection is established.

ACT LED

Located on each of the LAN ports, the ACT LED is a LAN LED that lights up in green. When the communication state is Link up, the ACT LED lights up. When the communication state is Link down, the ACT LED lights off. The ACT LED lights off while data is being sent/received though the associated LAN connection. So, the ACT LED looks like it is blinking by lighting on and off.

具体实物图如下：



上图是 XSCF 的放大图，注意串口的右边是有 USB 口的，是可以通过 USB 口来传东西的，当然推荐配好网络后通过 XSCF-LAN0 或 XSCF-LAN1 来进行 LOG 等的传递。



机器后部电源接口旁边的是主板集成的 2 个网口，在系统里面的名字分别是：bge0　bge1。

㈠　电源线的改造（现学现卖，呵呵）：

M4000 是单相供电的，电源线有两种：一种是防水（消防）插座，这就不需要改造了，现场对接上另一半即可；另外一种是三个头的那种大头插头，需要改造，黄绿色（双色线）是地线，黑色是火线，白色是零线。

题外话：没有四个以上身体健壮的人请不要轻易尝试去搬机器或上架，以免发生不必要的意外情况。

㈡　串口连接

机器的串口在机器后部 PCI 插槽上方，有明显的串口标志，如上图。

串口线和 pp450 ，cisco 等设备相同 标准如下：

Connection Diagram for Serial Cable

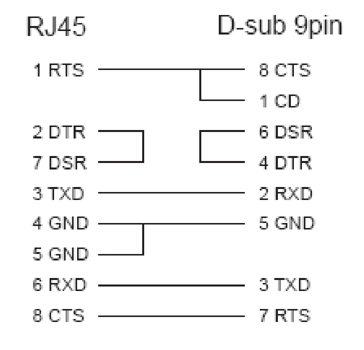


FIGURE D-1 Connection Diagram for Serial Cable

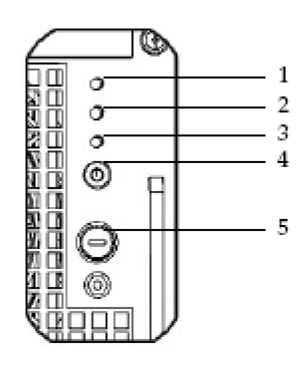


连接好串口线之后 用终端工具登陆串口：

The console should have the following settings:

- Baud rate: 9600 bps
- Data length: 8 bit
- Parity: None
- Stop: 1 bit
- Flow control: None
- Delay: Except for 0

SPARC Enterprise M4000 Operator Panel



Location Number	Component
1	Power LED
2	XSCF Sandby LED
3	Check LED
4	Power button
5	Mode switch (keyswitch)

插上电源线，从串口就会有大量信息输出到你的终端软件，XSCF Standby LED 的绿色灯就开始不停的闪烁，自检并初始化完成后灯就稳定下来变成常绿色。当 Domain 没有启动时，Power LED 是没有亮的。

XSCF 初始化完毕后就可以出现如下登陆界面

```
login:
```

键入

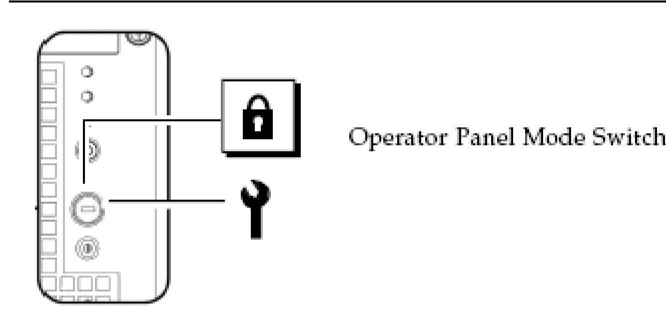
```
login: default
```

然后会有如下提示

```
Change the panel mode switch to Locked and press return...
```

此时将钥匙插入旋转到维护档





键入回车键

然后系统会有如下提示

Leave it in that position for at least 5 seconds. Change the panel mode switch to Locked, and press return...

此时注意要等待 5 秒钟后键入回车键

上述操作完成后可以进入 XSCF 命令界面

XSCF>

XSCF>

㈢ 察看机器配置,创建用户及配置网络等步骤大致如下(斜线代表输入的信息)：

检查机器配置和硬件状态

```
XSCF> showhardconf
SPARC Enterprise M4000 M4000;
    + Serial:BCF072603Q; Operator_Panel_Switch:Service;
    + Power_Supply_System:Single; SCF-ID:XSCF#0;
    + System_Power:Off;
    Domain#0 Domain_Status:Powered Off;

    MBU_A Status:Normal; Ver:0101h; Serial:BF07210VCH  ;
        + FRU-Part-Number:CF00541-0893 03   /541-0893-03          ;
        + Memory_Size:16 GB;
        CPUM#0-CHIP#0 Status:Normal; Ver:0201h; Serial:PP071200J7  ;
            + FRU-Part-Number:CF00375-3477 01   /375-3477-01          ;
            + Freq:2.150 GHz; Type:16;
            + Core:2; Strand:2;
        CPUM#0-CHIP#1 Status:Normal; Ver:0201h; Serial:PP071200J7  ;
            + FRU-Part-Number:CF00375-3477 01   /375-3477-01          ;
            + Freq:2.150 GHz; Type:16;
```

```
    + Core:2; Strand:2;
MEMB#0 Status:Normal; Ver:0101h; Serial:BF064202JP  ;
    + FRU-Part-Number:CF00541-0545 04   /541-0545-04          ;
    MEM#0A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f52dfb4a;
        + Type:1A; Size:1 GB;
    MEM#0B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f52dfb99;
        + Type:1A; Size:1 GB;
    MEM#1A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f52dfc66;
        + Type:1A; Size:1 GB;
    MEM#1B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f52dfc6f;
        + Type:1A; Size:1 GB;
    MEM#2A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33c551a;
        + Type:1A; Size:1 GB;
    MEM#2B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33c5523;
        + Type:1A; Size:1 GB;
    MEM#3A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33c5542;
        + Type:1A; Size:1 GB;
    MEM#3B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33c5528;
        + Type:1A; Size:1 GB;
MEMB#1 Status:Normal; Ver:0101h; Serial:BF064202DD  ;
    + FRU-Part-Number:CF00541-0545 04   /541-0545-04          ;
    MEM#0A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33d4f84;
        + Type:1A; Size:1 GB;
    MEM#0B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f12e4d52;
        + Type:1A; Size:1 GB;
    MEM#1A Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f33d645f;
        + Type:1A; Size:1 GB;
    MEM#1B Status:Normal;
        + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f3408a7a;
```




```
                + Type:1A; Size:1 GB;
            MEM#2A Status:Normal;
                + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f12e6009;
                + Type:1A; Size:1 GB;
            MEM#2B Status:Normal;
                + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f12e5f56;
                + Type:1A; Size:1 GB;
            MEM#3A Status:Normal;
                + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f12e5f6b;
                + Type:1A; Size:1 GB;
            MEM#3B Status:Normal;
                + Code:ce0000000000000002M3 93T2950CZ3-CD5 3343-f12e5f53;
                + Type:1A; Size:1 GB;
        DDC_A#0 Status:Normal;
        DDC_A#1 Status:Normal;
        DDC_B#0 Status:Normal;
    IOU#0 Status:Normal; Ver:0101h; Serial:BF070908PE  ;
        + FRU-Part-Number:CF00541-2240 01   /541-2240-01          ;
        DDC_A#0 Status:Normal;
        DDCR Status:Normal;
        DDC_B#0 Status:Normal;
    XSCFU Status:Normal,Active; Ver:0101h; Serial:BF07140ETW  ;
        + FRU-Part-Number:CF00541-0481 03   /541-0481-03          ;
    OPNL Status:Normal; Ver:0101h; Serial:BF07210U9X  ;
        + FRU-Part-Number:CF00541-0850 05   /541-0850-05          ;
    PSU#0 Status:Normal; Serial:0017527-0716062016;
        + FRU-Part-Number:CF00300-1898 0350 /300-1898-03-50;
        + Power_Status:Off; AC:200 V;
    PSU#1 Status:Normal; Serial:0017527-0719062124;
        + FRU-Part-Number:CF00300-1898 0350 /300-1898-03-50;
        + Power_Status:Off; AC:200 V;
    FAN_A#0 Status:Normal;
    FAN_A#1 Status:Normal;
    FANBP_B Status:Normal; Ver:0201h; Serial:BF07210T7Q  ;
        + FRU-Part-Number:CF00541-0909 02   /541-0909-02          ;
        FAN_B#0 Status:Normal;
        FAN_B#1 Status:Normal;

XSCF> showhardconf -u
SPARC Enterprise M4000 M4000; Memory_Size:16 GB;
```




```
+------------------------------------+------------+
|               FRU                  |  Quantity  |
+------------------------------------+------------+
| MBU_A                              |      1     |
|     CPUM                           |      1     |
|         Freq:2.150 GHz;            |  (   2)    |
|     MEMB                           |      2     |
|         MEM                        |     16     |
|             Type:1A; Size:1 GB;    |  (  16)    |
|     DDC_A                          |      2     |
|     DDC_B                          |      1     |
| IOU                                |      1     |
|     DDC_A                          |      1     |
|     DDC_B                          |      1     |
|     DDCR                           |      1     |
| XSCFU                              |      1     |
| OPNL                               |      1     |
| PSU                                |      2     |
| FAN_A                              |      2     |
| FANBP_B                            |      1     |
|     FAN_B                          |      2     |
+------------------------------------+------------+
XSCF> adduser  ce
XSCF> password ce
New XSCF password: abc123
BAD PASSWORD: it is based on a dictionary word
Retype new XSCF password: abc123
XSCF> setprivileges ce platadm

XSCF> adduser  fe
XSCF> password fe
New XSCF password: abc123
BAD PASSWORD: it is based on a dictionary word
Retype new XSCF password: abc123
XSCF> setprivileges fe fieldeng

XSCF>  showuser -l
User Name:          ce
UID:                100
Status:             Enabled
```




```
Minimum:             0
Maximum:             99999
Warning:             7
Inactive:            -1
Last Change:         Jan 01, 2001
Password Expires:    Never
Password Inactive:   Never
Account Expires:     Never
Privileges:          platadm

User Name:           fe
UID:                 101
Status:              Enabled
Minimum:             0
Maximum:             99999
Warning:             7
Inactive:            -1
Last Change:         Jan 01, 2001
Password Expires:    Never
Password Inactive:   Never
Account Expires:     Never
Privileges:          fieldeng
XSCF> exit

login: ce
Password:
XSCF> showuser –a
User Name:           ce
Status:              Enabled
Minimum:             0
Maximum:             99999
Warning:             7
Inactive:            -1
Last Change:         Jan 01, 2001
Password Expires:    Never
Password Inactive:   Never
Account Expires:     Never

XSCF> setdscp
DSCP network  [0.0.0.0          ] > 192.168.254.0
```




```
DSCP netmask  [255.255.255.0  ] > 255.255.255.0
XSCF address  [192.168.254.1  ] >        输入回车键
Domain #00 address  [192.168.254.2  ] >  输入回车键
Domain #01 address  [192.168.254.3  ] >  输入回车键
Commit these changes to the database? [y|n] : y

XSCF> showdscp
DSCP Configuration:
Network: 192.168.254.0
Netmask: 255.255.255.0
 Location      Address
----------    ---------
XSCF          192.168.254.1
Domain #00    192.168.254.2
Domain #01    192.168.254.3

XSCF> setnetwork  xscf#0-lan#0 192.168.1.1
XSCF> setnetwork  xscf#0-lan#1 192.168.2.1
XSCF> setnetwork  -c up xscf#0-lan#1
XSCF> setnetwork  -c up xscf#0-lan#0
XSCF> sethostname xscf#0 xscf0-Fujitsu-test-1
XSCF> sethostname -d xscf-fujitsu-test
XSCF> setroute  -c add  -n 0.0.0.0 -g 192.168.1.254  xscf#0-lan#0
XSCF> setroute  -c add  -n 0.0.0.0 -g 192.168.2.254  xscf#0-lan#1

XSCF> applynetwork
 The following network settings will be applied:
  xscf#0 hostname  :xscf0-Fujitsu-test-1
  DNS domain name  :xscf-fujitsu-test

  interface        :xscf#0-lan#0
  status           :up
  IP address       :192.168.1.1
  netmask          :255.255.255.0
  route            :-n 0.0.0.0 -m 0.0.0.0 -g 192.168.1.254

  interface        :xscf#0-lan#1
  status           :up
  IP address       :192.168.2.1
  netmask          :255.255.255.0
```




```
  route              :-n 0.0.0.0 -m 0.0.0.0 -g 192.168.2.254

Continue? [y|n] :y
Please reset the XSCF by rebootxscf to apply the network settings.
Please confirm that the settings have been applied by executing
showhostname, shownetwork, showroute and shownameserver after rebooting
the XSCF.
```

执行后，XSCF 会自动重新启动

```
XSCF> showtimezone -c tz
UTC
XSCF> settimezone -c settz -s Asia/Shanghai
Asia/Shanghai
XSCF> setdate -s 060614042008.00
Tue Jun 17 13:55:00 CST 2008
The XSCF will be reset. Continue? [y|n] :y
```

重新启动后，察看输出类似如下：

```
XSCF> showtimezone   -c tz
Asia/Shanghai
XSCF> showdate
Fri Jun  6 14:19:35 CST 2008
```

有些地区可能需要设置海拔，命令类似如下：

```
XSCF> setaltitude -s altitude=1000
1000m
```

四．XSCF 非常有用的配置（提高管理性）

下面这些配置操作如果不执行并不会影响系统安装等，但是将大大降低 M 系列的可管理性和易维护性，强烈建议配好这些后才开始安装 OS。

XSCF> settelnet -c enable
XSCF> setssh -c enable
The XSCF will be reset. Continue? [y|n] :Y

XSCF> sethttps   -c   genserverkey -q -y
Enter passphrase: ***111***
Verifying - Enter passphrase: ***111***

XSCF> sethttps   -c   selfsign CN gd sz ce test scf-host abc@fujitsu.com



Server key already exists. Do you still wish to update? [y|n] :y
Enter passphrase: ***111***
Verifying - Enter passphrase: ***111***

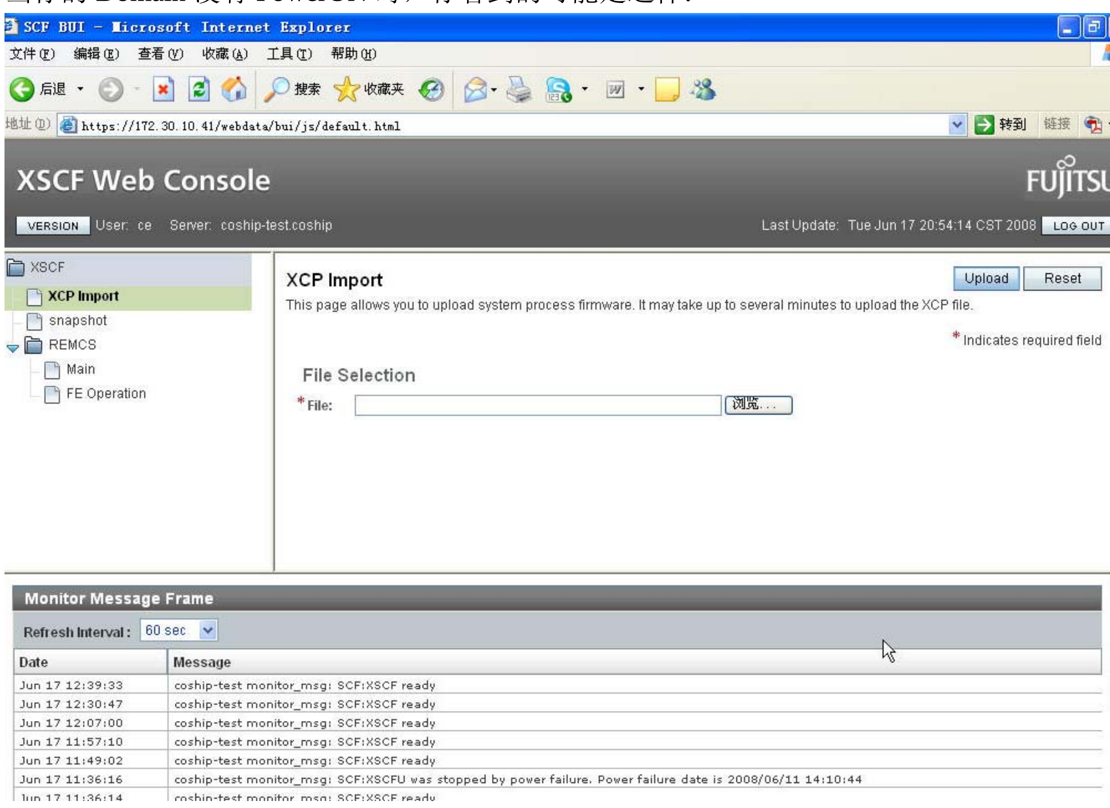
XSCF> sethttps -c enable
The XSCF will be reset. Continue? [y|n] :y

重新启动后，察看如下：
XSCF> showtelnet
Telnet status: enabled
XSCF> showssh
SSH status: enabled
RSA key:
ssh-rsa
AAAAB3NzaC1yc2EAAAABIwAAAIEA019QJ0sgjosGgTK9nd8eOlzMhQaED6L3+L50gUOx
qrwsdhK2xzkvrcfg6mP8KXGnOnr7tH8RJovSlWmaxuazNkaNtKQm7/0w24dli0FoDcBRq3eyaU
2pKm4e9xj0GTKbShQvxOZ4TKiw7daHuKoOi7ixkwEyO9djvityZ/ERMx8=
Fingerprint:
1024 9c:26:a4:e7:76:15:0e:c1:17:c5:e1:d3:44:4c:7d:ae
DSA key:
ssh-dss
AAAAB3NzaC1kc3MAAACBAMDSmogLsjpU2/hrqqTUioQT4pbjKL5cxIGqHSQWzUdZIvjY
V4ss5+Ugiw35bd8TcXvepxiGe94IcmnAoNUuj/MazlEzfBDZGckSJ0EduBQ6uUyTyRgZ++Snpd
F5U5aNIQj7yE75iA1wOERjLKi7XrUyYvivmR7PNm2xeaC4mrpPAAAAFQD4edjwZQ13Oyo9
hl/cH9nqZrmzLQAAAIBsYi2A0JnI3DVJh6YpIeQ2kQvphXD91GHMWYspsUySz/g8EGhTTH//
QTT2Ahl/lZ3piGbYkZ/1T/ARsNfGiRbC42lQmllbgdOBLmqKX0108hJL0pDj3+B/vZ5TvCwkgo
Hy3NOuKx8vroH09cG8XXJlRjx+JBN3PS7EftLfpUWkWgAAAIBSPTCLx0l3cWjmVDUK/AA
IpUl+0Io3kERj0NWl7M9Ppwbkd90YH9Lv1kgTtndX82eo8wQLGUsvCvKmRr089u8Fiyz5dtLV
z5CvvwHgPjgk31RG2OrbTj+nroGTWHTrveclNaeQltMA+SiqaN+C6ZzikoeLJdHlr8DvaVMMg
xSLpQ==
Fingerprint:
1024 3c:72:50:3a:d0:5b:b2:88:68:49:18:03:f0:d9:14:11
XSCF> showhttps
HTTPS status: enabled
Server key: installed in Jun 17 12:39:04 UTC 2008
CA key: installed in Jun 17 12:39:04 UTC 2008
CA cert: installed in Jun 17 12:39:04 UTC 2008
CSR:
-----BEGIN CERTIFICATE REQUEST-----
MIIBtjCCAR8CAQAwdjELMAkGA1UEBhMCQ04xCzAJBgNVBAgTAmdkMQswCQYDVQQ



H
EwJzejELMAkGA1UEChMCY2UxDTALBgNVBAsTBHRlc3QxETAPBgNVBAMTCHNjZi1o
b3N0MR4wHAYJKoZIhvcNAQkBFg9hYmNAZnVqaXRzdS5jb20wgZ8wDQYJKoZIhvcN
AQEBBQADgY0AMIGJAoGBAMcmodoe7hIA865Cq5XFyND6TScBKkx5EjhBItx96JmW
dcBFgrbq6vFWgnG8nBQkEKKW9pc1uCh9tZ04O3RS29wqlKz90D3SBMV8V1qVmlpS
6wL+3kPE18SD4U875PGWqr0YGjMSESit8JXJbAEx/p3ttKL1uKmMlmFqvGcSyAbj
AgMBAAGgADANBgkqhkiG9w0BAQQFAAOBgQBpibrYCsFtaIzR+ptRqo9ZL1SAPNSh
PP467C+2jOYtk1lb0DT623X7D6CnCijHkXbv0/1oGd/EL3Pz81vBy57gRreQ753i
ZaorNkJmiSqFD6TvkUC55VIDNZG1e8G6WkBI3sbUrxvha4u984uPLzFumOcoBgda
WN2Yp3tIjSJdpQ==
-----END CERTIFICATE REQUEST-----

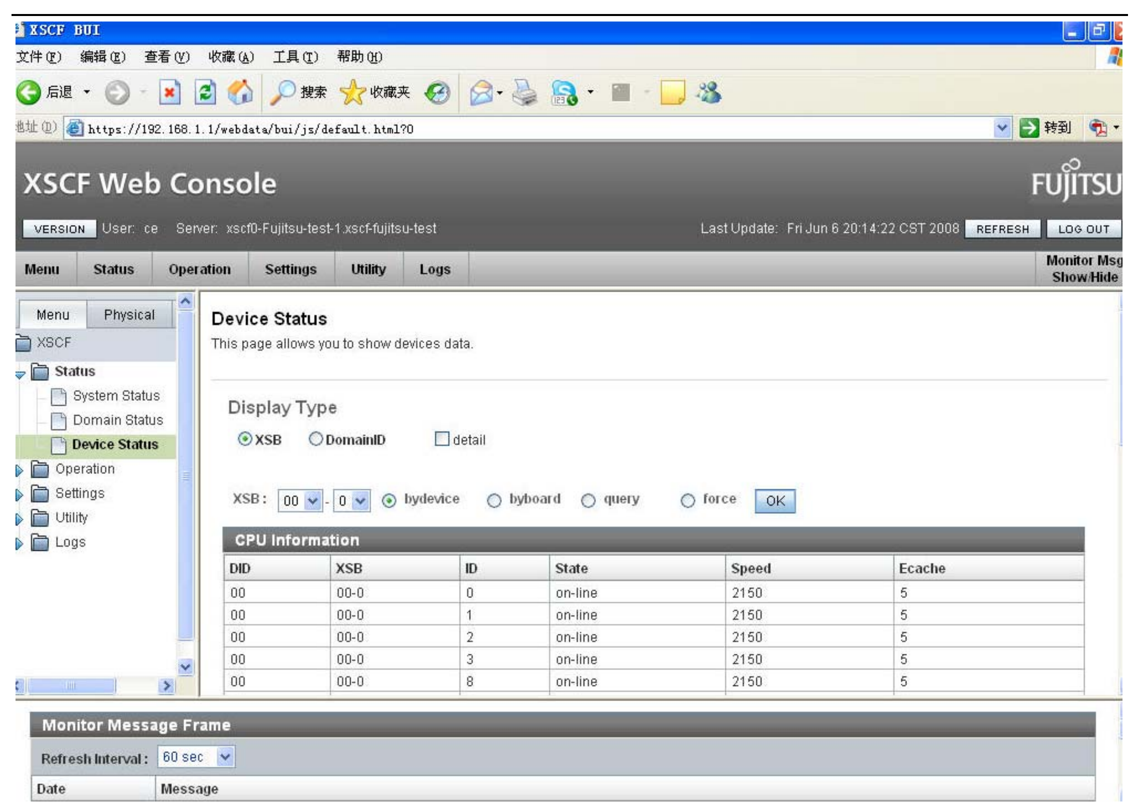
配好以上这些你就可以通过 telnet,ssh,https 从 XSCF 的 LAN0，LAN1 口登录上来进行管理。当你的 Domain 没有 PowerON 时，你看到的可能是这样：



当你的系统等都安装好并启动后，你看到的应该是如下图：







当然 XSCF 还有很多有用的配置，大家可以慢慢去发掘。

五．DOMAIN 配置概述（M4000 一般不需要配置）

M4000 一般出厂就已经设好，不需要再去划 Domain。

当 Domain 没有 PowerON 时，你看到的可能是这样：

```
XSCF> showfru -a sb
Device    Location      XSB Mode          Memory Mirror Mode
sb          00               Uni                   no
XSCF> showboards -a
XSB   DID(LSB) Assignment  Pwr   Conn Conf Test      Fault
---- -------- ----------- ---- ---- ---- ------- --------
00-0 00(00)     Assigned      n      n      n      Unknown Normal
XSCF> showboards -va
XSB   R DID(LSB) Assignment  Pwr   Conn Conf Test      Fault      COD
---- - -------- ----------- ---- ---- ---- ------- -------- ----
00-0 * 00(00)     Assigned      n      n      n      Unknown Normal    n
XSCF> showdcl -a
DID     LSB     XSB     Status
00                          Powered Off
           00       00-0
```




```
XSCF> showdcl -v -a
DID     LSB     XSB     Status      No-Mem     No-IO     Float     Cfg-policy
00                      Powered Off                                FRU
        00      00-0                False      False     False
        01      -
        02      -
        03      -
        04      -
        05      -
        06      -
        07      -
        08      -
        09      -
        10      -
        11      -
        12      -
        13      -
        14      -
        15      -

XSCF> showdomainstatus -a
DID              Domain Status
00               Powered Off
01               -

XSCF> showdomainmode -d 0
Host-ID                     :843aa2b5
Diagnostic Level          :min
Secure Mode                 :on
Autoboot                    :on
```

当 **Domain** 执行完 **PowerON** 后，你看到的可能是这样：

```
XSCF> showfru -a sb
Device    Location      XSB Mode            Memory Mirror Mode
sb          00            Uni                 no
XSCF> showboards -a
XSB   DID(LSB) Assignment   Pwr   Conn Conf Test      Fault
---- -------- ----------- ---- ---- ---- ------- --------
00-0 00(00)    Assigned      y      y      y      Passed   Normal
XSCF> showboards -va
```




```
XSB    R DID(LSB) Assignment   Pwr   Conn Conf Test      Fault      COD
---- - -------- ----------- ---- ---- ---- ------- -------- ----
00-0     00(00)    Assigned      y      y      y      Passed   Normal     n
XSCF> showdcl -a
DID     LSB     XSB     Status
00                      Running
        00      00-0
XSCF> showdcl -v -a
DID     LSB     XSB     Status     No-Mem     No-IO      Float      Cfg-policy
00                      Running                                      FRU
        00      00-0               False      False      False
        01      -
        02      -
        03      -
        04      -
        05      -
        06      -
        07      -
        08      -
        09      -
        10      -
        11      -
        12      -
        13      -
        14      -
        15      -

XSCF> showdomainstatus -a
DID             Domain Status
00              Running
01              -
XSCF> showdevices -d 0      （可以参考前面设置 https 的图）

CPU:
----
DID XSB   id   state      speed   ecache
00   00-0 0     on-line    2150         5
00   00-0 1     on-line    2150         5
00   00-0 2     on-line    2150         5
00   00-0 3     on-line    2150         5
```

00	00-0 8	on-line	2150	5
00	00-0 9	on-line	2150	5
00	00-0 10	on-line	2150	5
00	00-0 11	on-line	2150	5
00	00-0 16	on-line	2150	5
00	00-0 17	on-line	2150	5
00	00-0 18	on-line	2150	5
00	00-0 19	on-line	2150	5
00	00-0 24	on-line	2150	5
00	00-0 25	on-line	2150	5
00	00-0 26	on-line	2150	5
00	00-0 27	on-line	2150	5

Memory:

DID	XSB	board mem MB	perm mem MB	base address	domain mem MB	target XSB	deleted mem MB	remaining mem MB
00	00-0	16384	1505	0x000003c000000000	16384			

IO Devices:

DID	XSB	device	resouce	usage
00	00-0	sd0	/dev/dsk/c0t0d0s0	mounted filesystem "/"
00	00-0	sd0	/dev/dsk/c0t0d0s1	swap area
00	00-0	sd0	/dev/dsk/c0t0d0s1	dump device (swap)
00	00-0	sd0	/dev/dsk/c0t0d0s3	mounted filesystem "/opt"
00	00-0	sd0	/dev/dsk/c0t0d0s4	mounted filesystem "/export/home"
00	00-0	bge0	SUNW_network/bge0	bge0 hosts IP addresses: 172.18.1.57

如果需要做 Domain 的划分等，请参考 Administration Guide(C120-E331-05EN)的 P78-P96(Domain Configuration) 和 Dynamic Reconfiguration (DR) User's Guide(C120-E335-04EN)及 Capacity on Demand (COD) User's Guide （C120-E336-04EN）或者参考姚晓军老师写的"APL XSCF 配置要求"。

六. OS 的安装及 console 的切换

XSCF与console的切换方法如下：

1) XSCF Shell→Console

XSCF> console –d domainID (M4000 的 domainID 一般是 0)



2)OS Console-→XSCF Shell

先后按[ENTERN 键],[#键(就是 shift+3)]以及[. 键]

配好前面 XSCF 的那些有用配置后，此时按照如下操作（顺序不要反了）：

XSCF> poweron -d 0
DomainIDs to power on:00
Continue? [y|n] :y
00 :Powering on

Note
  This command only issues the instruction to power-on.
  The result of the instruction can be checked by the "showlogs power".

再执行

XSCF> console -d 0
Connect to DomainID 0?[y|n] :y

当你切换到 ok 提示符下，先执行以下命令

{0} ok devalias

cdrom	/pci@0,600000/pci@0/pci@8/pci@0/scsi@1/disk@3,0:f
net	/pci@0,600000/pci@0/pci@8/pci@0/network@2
disk	/pci@0,600000/pci@0/pci@8/pci@0/scsi@1/disk@0
name	aliases

{0} ok show-devs
/pci@3,700000
/pci@2,600000
/pci@1,700000
/pci@0,600000
/pci@8,4000
/cmp@408,0
/cmp@400,0
/pseudo-mc@200,200
/nvram
/pseudo-console
/virtual-memory
/memory@m3c000000000
/aliases
/options
/openprom




```
/chosen
/packages
/pci@3,700000/fibre-channel@0,1
/pci@3,700000/fibre-channel@0
/pci@2,600000/fibre-channel@0,1
/pci@2,600000/fibre-channel@0
/pci@1,700000/pci@0,1
/pci@1,700000/pci@0
/pci@1,700000/pci@0,1/FJSV,e4ta@6,1
/pci@1,700000/pci@0,1/FJSV,e4ta@6
/pci@1,700000/pci@0/FJSV,e4ta@4,1
/pci@1,700000/pci@0/FJSV,e4ta@4
/pci@0,600000/pci@0
/pci@0,600000/pci@0/pci@9
/pci@0,600000/pci@0/pci@8
/pci@0,600000/pci@0/pci@8/pci@0,1
/pci@0,600000/pci@0/pci@8/pci@0
/pci@0,600000/pci@0/pci@8/pci@0/network@2,1
/pci@0,600000/pci@0/pci@8/pci@0/network@2
/pci@0,600000/pci@0/pci@8/pci@0/scsi@1
/pci@0,600000/pci@0/pci@8/pci@0/scsi@1/disk
/pci@0,600000/pci@0/pci@8/pci@0/scsi@1/tape
/pci@8,4000/ebus@1
/pci@8,4000/ebus@1/panel@14,280030
/pci@8,4000/ebus@1/scfc@14,200000
/pci@8,4000/ebus@1/serial@14,400000
/pci@8,4000/ebus@1/flashprom@10,0
/cmp@408,0/core@1
/cmp@408,0/core@0
/cmp@408,0/core@1/cpu@1
/cmp@408,0/core@1/cpu@0
/cmp@408,0/core@0/cpu@1
/cmp@408,0/core@0/cpu@0
/cmp@400,0/core@1
/cmp@400,0/core@0
/cmp@400,0/core@1/cpu@1
/cmp@400,0/core@1/cpu@0
/cmp@400,0/core@0/cpu@1
/cmp@400,0/core@0/cpu@0
/openprom/client-services
```

/packages/ufs-file-system
/packages/obp-tftp
/packages/terminal-emulator
/packages/disk-label
/packages/deblocker
/packages/SUNW,builtin-drivers

{0} ok probe-scsi-all
/pci@0,600000/pci@0/pci@8/pci@0/scsi@1

MPT Version 1.05, Firmware Version 1.11.00.00

Target 0
Unit 0 Disk SEAGATE ST973402SSUN72G 0400 143374738 Blocks, 73 GB
SASAddress 5000c50007780fe1 PhyNum 0
Target 1
Unit 0 Disk SEAGATE ST973402SSUN72G 0400 143374738 Blocks, 73 GB
SASAddress 5000c5000777ec1d PhyNum 1
Target 2
Unit 0 Removable Tape SEAGATE DAT DAT72-000C0B0
SATA device PhyNum 2
Target 3
Unit 0 Removable Read Only device TSSTcorpCD/DVDW TS-L632DSR02
SATA device PhyNum 3

看到以上输出确认没有问题后开始安装，先放入安装光盘，执行
{0} ok boot cdrom
如果你安装的是 Solaris 10 8/07 版本的操作系统，杨勇专门写过一个邮件。我将邮件的内容贴在这里，大家安装时可以参考下：
Solaris 10 8/07 版本的操作系统，根据 GSD 上的文档，
该版本的安装有一些注意事项：
1 安装顺序的变化：最新的安装顺序 OS-> ESF/ESF PATCH->Recommended & Security Patches cluster ->PTF08021->127111-10 内核补丁；
2 该版本的 PTF 最低版本要求是 08021；
3 打完 PTF08021 后使用 uname -a 输出的内核版本是 127111-06，最新的 127111-10 内核补丁最后单独打。
最新的 Recommended &Security Patches Cluster 和 127111-10 内核补丁已放在 \\10.167.53.111\Technical Document\FIRMWARE_AND_HCP_AND_PTF\PW_Solaris_PTF&ESF 目录下。



Recommended &Security Patches Cluster 是一个 zip 压缩文件，大小是 460MB 左右，在系统中解压后有 1.2G，请注意系统硬盘空间是否够，不够的话安装有问题。

解压后执行目录下的安装脚步即可，注意在单用户模式下安装。

如果你按照以上步骤执行，没有误操作的话，全部安装完成大概需要 5-6 个小时。

安装完成后执行如下检查：

```
bash-3.00# ls -l /var/sadm/patch |wc -l
     118
bash-3.00# uname -a
SunOS coship 5.10 Generic_127111-10 sun4u sparc SUNW,SPARC-Enterprise
bash-3.00# Rpatchinfo -L
ID    S NAME          VERSION     CLUSTER      PATCH-LIST     TIME
0001 a Solaris10       R08021      10          .FD_SOLOS     080606:19:48:15
```

当然如果你觉得有必要的话，可以再去单用户模式下做个备份

```
bash-3.00# flar create   -c   -n flash -x /flash /flash/dcjj.flar
```

七.　XCP 的升级

察看当前版本相关命令如下：

```
XSCF> version -c cmu
DomainID  0: 00.00.0000
DomainID  1: 00.00.0000
XSCF> version -c xscf
XSCF#0 (Active )
01.04.0002(Current) 01.04.0002(Reserve)
XSCF> version -c xcp
XSCF#0 (Active )
XCP0 (Current): 1041
XCP1 (Reserve): 1041
XSCF> version -c xcp -v
XSCF#0 (Active )
XCP0 (Current): 1041
OpenBoot PROM : 01.25.0000
XSCF          : 01.04.0002
XCP1 (Reserve): 1041
OpenBoot PROM : 01.25.0000
XSCF          : 01.04.0002
OpenBoot PROM BACKUP
#0: 01.24.0001
#1: 01.25.0000
```



关于 XCP 的升级请参考 XSCF User's Guide(C120-E332-05EN)的 P265-P288（Upgrade of XSCF Firmware and Maintenance）,

There are two types of firmware program files (tar.gz) as described below:

- The firmware program for midrange systems (the file name begins with FFXCP).
- The firmware program for high-end systems (the file name begins with DCXCP).

When you import the firmware (the XCP importing), choose the appropriate firmware program for your system.

现场实际操作步骤如下：

通过 XSCF 命令或 https（前面 https 的设置中有示意图）将 XCP 文件传到机器上面，此时执行如下命令开始升级操作：

```
XSCF> getflashimage -l
Existing versions:
    Version              Size   Date
    FFXCP1061.tar.gz   49044589  Tue Jun 17 21:11:20 2008
XSCF> flashupdate -c update -m xcp -s 1061
The XSCF will be reset. Continue? [y|n] :y
XCP update is started (XCP version=1061:last version=1041)
OpenBoot PROM update is started (OpenBoot PROM version=01300000)
OpenBoot PROM update has been completed (OpenBoot PROM version=01300000)
XSCF update is started (XSCFU=0,bank=1,XCP version=1061:last version=1041)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=00:version=01060002:last version=01020010)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=00:version=01060002:last version=01020010)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=01:version=01060002:last version=01040002)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=01:version=01060002:last version=01040002)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=02:version=01060000:last version=01040001)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=02:version=01060000:last version=01040001)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=03:version=01060000:last version=01040001)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=03:version=01060000:last version=01040001)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=04:version=01060002:last version=01040002)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
```




```
Firmware Element ID=04:version=01060002:last version=01040002)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=05:version=01050000:last version=01040001)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=05:version=01050000:last version=01040001)
XSCF download is started (XSCFU=0,bank=1,XCP version=1061:last version=1041, Firmware
Element ID=07:version=01060000:last version=01010008)
XSCF download has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041,
Firmware Element ID=07:version=01060000:last version=01010008)
XSCF update has been completed (XSCFU=0,bank=1,XCP version=1061:last version=1041)
XSCF is rebooting to update the reserve bank
XSCF> Jun 17 13:40:24 coship-test XSCF[105]: XSCF shutdown sequence start execute
K000end  --  complete
```

以上这个过程大约需要十分钟，机器自动重新启动后开始剩下一半的升级，

```
login: ce
Password:
flashupdate now in progress.

please wait for flashupdate complete
```

如果你反应够快此时输入如下命令可以看到

```
XSCF> version -c cmu
DomainID  0: 01.30.0000
DomainID  1: 01.30.0000
XSCF> version -c xscf
XSCF#0 (Active )
01.04.0002(Reserve) 01.06.0002(Current)
XSCF> version -c xcp
XSCF#0 (Active )
XCP0 (Reserve): 1041
XCP1 (Current): 1061
```

当然屏幕上很快会出现升级过程的信息，不要中断它，等它升级完成，完成后察看如下：

```
XSCF> version -c cmu
DomainID  0: 01.30.0000
DomainID  1: 01.30.0000
XSCF> version -c xscf
XSCF#0 (Active )
01.06.0002(Reserve) 01.06.0002(Current)
XSCF> version -c xcp
XSCF#0 (Active )
```




```
XCP0 (Reserve): 1061
XCP1 (Current): 1061
XSCF> version -c xcp -v
XSCF#0 (Active )
XCP0 (Reserve): 1061
OpenBoot PROM : 01.30.0000
XSCF          : 01.06.0002
XCP1 (Current): 1061
OpenBoot PROM : 01.30.0000
XSCF          : 01.06.0002
OpenBoot PROM BACKUP
#0: 01.30.0000
#1: 01.25.0000
```

八. XSCF定位问题的方法及步骤

当机器出现红灯，或者console及系统里面收到告警时，这些检查机器及系统状态的命令就是非常必要的。当然系统没有问题时，多查看下也是好的。

当系统还能够正常运行时，可以考虑先做如下操作，再做下面其他的操作：

1．bash-3.00# prtdiag -v

```
System Configuration:  Sun Microsystems   sun4u Fujitsu SPARC Enterprise M4000 Server
System clock frequency: 1012 MHz
Memory size: 16384 Megabytes

==================================== CPUs ====================================

      CPU          CPU              Run      L2$     CPU     CPU
LSB   Chip         ID               MHz      MB      Impl.   Mask
---   ----   -------------------   ----     ---     -----   ----
 00     0         0,   1,   2,   3  2150     5.0        6      147
 00     1         8,   9,  10,  11  2150     5.0        6      147
 00     2        16,  17,  18,  19  2150     5.0        6      147
 00     3        24,  25,  26,  27  2150     5.0        6      147

====================== Memory Configuration ======================
      Memory   Available           Memory     DIMM      Number of
LSB   Group    Size                Status     Size      DIMMs
---   ------   ------------------  -------    ------    ---------
 00     A        8192MB             okay       2048MB        4
 00     B        8192MB             okay       2048MB        4
```




```
========================= IO Devices =========================

    IO                                              Lane/Frq
LSB Type   LPID    RvID,DvID,VnID        BDF        State Act,   Max    Name                              Model
--- ----- ----     ------------------    --------- ----- ----------- ------------------------------ --------------------
    Logical Path
    ------------
00  PCIe   0      bc, 8532, 10b5        2,   0,   0   okay      8,      8   pci-pciex10b5,8532              N/A
    /pci@0,600000/pci@0

00  PCIe   0      bc, 8532, 10b5        3,   8,   0   okay      8,      8   pci-pciex10b5,8532              N/A
    /pci@0,600000/pci@0/pci@8

00  PCIe   0      bc, 8532, 10b5        3,   9,   0   okay      4,      8   pci-pciex10b5,8532              N/A
    /pci@0,600000/pci@0/pci@9

00  PCIx   0       8,    125, 1033       4,   0,   0   okay    100,    133   pci-pciexclass,060400           N/A
    /pci@0,600000/pci@0/pci@8/pci@0

00  PCIx   0       8,    125, 1033       4,   0,   1   okay     --,    133   pci-pciexclass,060400           N/A
    /pci@0,600000/pci@0/pci@8/pci@0,1

00  PCI    0       2,     50, 1000       5,   1,   0   okay     --,    133   scsi-pci1000,50                 LSI,1064
    /pci@0,600000/pci@0/pci@8/pci@0/scsi@1

00  PCI    0      10, 1648, 14e4        5,   2,   0   okay     --,    133   network-pci14e4,1648            N/A
    /pci@0,600000/pci@0/pci@8/pci@0/network@2

00  PCI    0      10, 1648, 14e4        5,   2,   1   okay     --,    133   network-pci14e4,1648            N/A
    /pci@0,600000/pci@0/pci@8/pci@0/network

00  PCIx   0      b5,    103, 1166     119,   0,   0   okay    133,    133   pci-pciex1166,103               N/A
    /pci@0,600000/pci@0/pci@9/pci

00  PCI    0      a3, 1678, 14e4      120,   4,   0   okay     --,    133   FJSV,e2ta-fjgi                  Broadcom,BCM5715C
    /pci@0,600000/pci@0/pci@9/pci/FJSV,e2ta

00  PCI    0      a3, 1678, 14e4      120,   4,   1   okay     --,    133   FJSV,e2ta-fjgi                  Broadcom,BCM5715C
    /pci@0,600000/pci@0/pci@9/pci/FJSV,e2ta
```




```
00  PCIe  1   6, 1203, 15bc   2,  0,  0  okay   4,   4  fibre-channel     N/A
    /pci@1,700000/fibre-channel

00  PCIe  1   6, 1203, 15bc   2,  0,  1  okay   4,   4  fibre-channel     N/A
    /pci@1,700000/fibre-channel

00  PCIx  2   b5,  103, 1166   2,  0,  0  okay  133,  133  pci-pciex1166,103   N/A
    /pci@2,600000/pci

00  PCI   2   a3, 1678, 14e4   3,  4,  0  okay   --,  133  FJSV,e2ta-fjgi     Broadcom,BCM5715C
    /pci@2,600000/pci/FJSV,e2ta

00  PCI   2   a3, 1678, 14e4   3,  4,  1  okay   --,  133  FJSV,e2ta-fjgi     Broadcom,BCM5715C
    /pci@2,600000/pci/FJSV,e2ta

00  PCIe  3   6, 1203, 15bc   2,  0,  0  okay   4,   4  fibre-channel     N/A
    /pci@3,700000/fibre-channel

00  PCIe  3   6, 1203, 15bc   2,  0,  1  okay   4,   4  fibre-channel     N/A
    /pci@3,700000/fibre-channel

==================== Hardware Revisions ====================
System PROM revisions:
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OBP 4.24.4 2007/10/12 12:19

=================== Environmental Status ===================
Mode switch is in LOCK mode
```

2．bash-3.00# /opt/FJSVmadm/sbin/madmin

```
Machine Administration Menu

 1. Hardware Configuration
 2. Management of Hardware Error Event
 3. Log Data
 4. Hot Swapping Guide
 5. Remote Customer Support System (REMCS) Setup
 6. Auto Power Control System (APCS) Administration
```



3．bash-3.00# mail （察看邮件告警）

4．察看/var/adm/messages

bash-3.00# egrep -i 'panic|warn|fail|error|crit' /var/adm/messages

5. 此外，如果可以在自己的笔记本上建立FTP Server，（客户允许的话），则将相关日志及配置文件等都发送到笔记本上，以备仔细查询。

当系统无法正常运行时，就只能考虑下面这些操作：

Ⅰ. 在ok 下执行show-devs,devalias,probe-scsi-all等，察看输出结果。

Ⅱ. 切换到XSCF> 执行以下命令：（有些还需再加参数，请察看XSCF Reference Manual）

showhardconf
showhardconf -u
showstatus
showlogs event
showlogs power
showlogs console
showlogs error
showlogs panic
showlogs environment
showlogs audit
showlogs monitor
showlogs ipl
showlogs env
showmonitorlog
fmdump –V
fmdump –e
fmadm faulty
fmstat
testsb (perform an initial diagnosis of the specified physical system board(PSB))

类似操作参考如下：

XSCF> showhardconf
XSCF> showstatus
* FANBP_B Status:Faulted;
XSCF> showlogs error
Date: Jun 17 20:56:46 CST 2008 Code: 8000a000-c8020000-0167300e00000000
Status: Alarm Occurred: Jun 17 20:56:45.932 CST 2008
FRU: /FANBP_B
Msg: Critical low voltage error(detector=181)

将机器完全断电并拔掉电源线，再重新通电，反复操作几次，问题及报错始终存在。此时基本可以考虑察看MAINTENANCE MANUAL，更换相关设备。

Ⅲ. 如果你开始配置了XSCF的https，而且你能够登入并察看到相关状态及信息，这也是非常有助于你定位问题的。当然也可以将XSCF的日志导出来。

当问题排除后，此时看到的状态类似如下：
XSCF> showstatus
No failures found in System Initialization.

祝大家好运，事实上系统安装也只是系统管理工作的刚刚开始，以后还是需要你去维护它的，有空还是好好看下手册吧，尤其出现问题的时候更需要你耐心的这么去做。